$$= \frac{(100-0+1)}{2}\left(U_0 + U_{100}\right)$$

$$= \frac{101}{2}\left(-10 + 290\right) = \boxed{14140}$$

3) $\boxed{\forall n \in \mathbb{N};\ V_n = V_0 \cdot q^n}$

1) $\Rightarrow V_1 = V_0 \cdot q \Rightarrow q = \frac{V_1}{V_0} = 2$

Ainsi $\boxed{q = 2}$

2) $\forall n \in \mathbb{N}\quad V_n = 5 \cdot 2^n$

Donc $\boxed{V_4} = 5 \times 2^4 = \boxed{80}$

$$\boxed{V_{20} = 5 \times 2^{20}}$$

3) $S = PT \times \frac{1 - q^{NT}}{1-q}$

$$= V_0 \times \frac{1 - 2^{21}}{1-2}$$

$$= \boxed{5\left(2^{21} - 1\right)}$$

Qarray.tn -Aqra Blech- Qarray.tn